

What is claimed is

1. Method for producing a protective cover for a device, wherein a substrate is provided that includes the device,  
5 the method including:

(a) creating a sacrificial structure on the substrate, wherein the sacrificial structure comprises a first portion covering a first area of the substrate including the device and a second portion extending from the first portion into a second area of the substrate including no device;

10 (b) depositing a first cover layer enclosing the sacrificial structure such that the second portion of the sacrificial structure is at least partially exposed;

15 (c) removing the sacrificial structure; and

20 (d) closing the structure formed by the removal of the sacrificial structure.

25 2. Method of claim 1, wherein step (a) includes:

(a.1) applying a photoresist layer on the substrate;

30 (a.2) structuring the photoresist layer to expose the first area completely and the second area of the substrate partially; and

(a.3) growing sacrificial material on the exposed areas of the substrate.

35 3. Method of claim 1, wherein step (b) includes:

(b.1) depositing a photoresist layer on the structure resulting after step (a) to completely enclose the sacrificial structure; and

5 (b.2) structuring the photoresist layer to expose an end of the second portion of the sacrificial structure facing away from the first portion of the sacrificial structure.

10 4. Method of claim 1, wherein step (c) includes:

etching or dissolving the sacrificial structure.

5. Method of claim 1, wherein step (d) includes:

15 (d.1) applying a second cover layer on the structure resulting after step (c); and

(d.2) structuring the second cover layer such that the second cover layer covers the first cover layer deposited in step (b) and closes the cavity formed by the removal of the sacrificial layer.

20 6. Method of claim 5, wherein the first cover layer and the second cover layer consist of the same material.

25 7. Method of claim 1, wherein step (b) further includes forming at least one opening in the first cover layer to expose a portion of the sacrificial structure, and wherein step (d) further includes closing the formed opening.

30 8. Method of claim 1, wherein the sacrificial structure is produced from a material including a photoresist, a metal, or an oxide.

35 9. Method of claim 1, wherein the device includes a micromechanical structure formed in the substrate with at

least one movable part, wherein the movable part of the micromechanical structure in the substrate is fixed by a further sacrificial structure,

5 wherein the sacrificial layer produced in step (a) at least partially borders on the further sacrificial layer, and

10 wherein in step (c) the sacrificial structure and the further sacrificial layer are removed together in one step or successively in several steps to form the cavity and to expose the movable part of the micromechanical structure.

10. Method of claim 1, wherein the device is a SAW filter, a BAW filter, a resonator, a sensor or an actor.

15 11. Method of claim 1, wherein the substrate is a wafer including a plurality of like or different devices,

20 wherein in step (a) a sacrificial structure is produced for each of the devices by a sacrificial layer being applied on the wafer and structured,

wherein in step (b) the first cover layer is applied on the wafer and structured,

25 wherein in step (c) all sacrificial structures are removed, and

wherein in step (d) the cavities are closed.

30 12. Method of claim 11, wherein finally the wafer is diced.

35 13. Method of claim 11, wherein the structuring of the first cover layer includes the setting of dicing lines on the wafer.

14. Method of claim 11, wherein step (d) includes applying the second cover layer and structuring it to fix contact pads and dicing lines on the wafer.